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Wind, Light and Seating XpeRience (XR)

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Cross Disciplinary Virtual Reality for Lighting and Composition: Research Update

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Advanced technology has made Virtual Reality a viable tool for widespread multi-disciplinary use. We saw an opportunity to use VR to benefit multiple departments at RIT; 3D Digital Design, Industrial Design, Interior Design, and the School of Film and Animation. All departments wrestle with the problem of effectively allowing the students the speed to iteratively light, compose and compare work. The complexity and length of rendering time using previous generation (CPU rendering) 3D applications distracts learners from focusing on design. Light and Composition are two major elements of designs that are often buried under overwhelming technical obstacles.

VR is intuitive, realistic, and renders in real time (using the GPU). We developed design challenges, tools and tutorials for our students to accelerate their design within VR for understanding light and composition. The result was that their rendering quality improves, and our curricular vision gets implemented seamlessly. Pre-visualization, cinematography, and environment design are three areas that we are already seeing improved results by students using our research.

Keywords—*Vive, RIT, Cinematography, Lighting, Composition, VR*



Figure 1. Accelerated Spline Tools for Lighting & Layout



Figure 2. Tiltbrush for Cinematography & Composition